

owner's manual



Quality Uncompromised

ROTEL[®] RA-820BX2

STEREO INTEGRATED AMPLIFIER

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WARNING
TO PREVENT FIRE OR SHOCK HAZARD
DO NOT EXPOSE THIS APPLIANCE TO
RAIN OR MOISTURE

Write your SERIAL NUMBER here.

The number is located near the name
plate on the rear panel.

ENGLISH

STEREO INTEGRATED AMPLIFIER RA-820BX2

INTRODUCTION

We at Rotel want to thank you for purchasing our audio product.

Rotel audio products are designed to use the latest electronic technology, and they incorporate our long experience as a specialist manufacturer of audio equipment. We are confident that you will find satisfaction in the high quality sound and top performance, and that you will find pleasure in the functional beauty achieved through human-engineering concept. Before starting operation, please read this instruction manual thoroughly and acquaint yourself with the proper mode of using the unit and all its connections.

We hope you will enjoy top-notch performance for many years to come:

BEFORE ENJOYMENT/POWER SUPPLY

Follow the instructions below for maximum safety:

1. Use a wall outlet for power supply

Be sure to connect the AC line cord to a house-hold wall outlet. Be certain that the outlet voltage matches the electrical rating of the unit, found on the rear panel name plate.

2. Connecting and removing AC card

Be sure to connect or disconnect the AC line cord only after turning off the power switch to prevent possible shock noise or damage to the speakers.

3. Ventilate the unit well

Never block any ventilation holes at the top and bottom of the unit. Be sure also to provide ample ventilation space around the unit. Poor ventilation may result in damage due to excessive heat.

4. Do not open the cabinet

In order to avoid electric shock or damage to the component, never open the cabinet. If a foreign object falls inside the unit by mistake, turn the power off, disconnect the wall plug, and consult a qualified electrician or your dealer.

5. Installation

Be sure to place the unit in a level and flat place where it is free from humidity, vibration, high temperature and not exposed to direct sunlight. Be careful not to place the unit in a highly enclosed place such as near a wall or on a bookshelf. A poor ventilation will cause undesirable effects to the unit.

6. Moving the unit

When transporting, remove the AC cord from the wall outlet and all other connected cords on the rear panel to prevent wire breakage and short circuits.

7. If the unit gets wet

If your unit should get wet, immediately disconnect the AC cord, and consult your dealer or a qualified electrician.

8. Cleaning and maintenance

Do not use chemicals such as benzine or thinners on the front panel. Always use a soft, dry cloth to clean the unit.

9. Owner's manual

Keep the owner's manual near the unit, and record the serial number (found on the rear panel) on the cover.

SPEAKERS

Use speaker systems with impedance ratings of 4-16 ohms. Before hooking up your speaker system, be sure to check its impedance, which should be indicated either on the back of the speaker, or in the speaker instruction manual.

HOOING UP SPEAKERS

Your Rotel amplifier provides the facility for either direct or switched speaker connection.

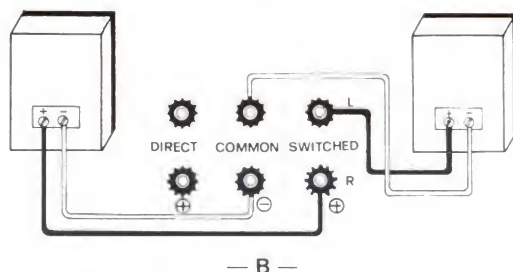
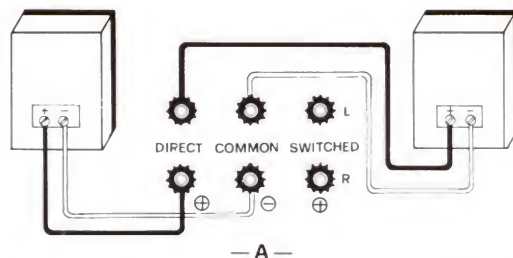
The direct sockets, in keeping with our design philosophy incorporate "straight line" signal paths. When using headphones for private listening it will be necessary to disconnect your loudspeaker leads from the amplifier. Connection instructions are shown in diagram 'A'.

The switched sockets will provide the convenience of switching off the speakers when using headphones for private listening. Connection instructions are shown in diagram 'B'.

The speaker terminals are combined binding posts and 4mm sockets suitable for use with 4mm banana plugs or direct attachment of speaker wires.

SPEAKER (RIGHT)

SPEAKER (LEFT)



EXCLUSIVE NOTE FOR U.K.

If your unit comes with a 3-core cable without a plug, make certain live, neutral and earth leads are connected to the proper terminals. Check that the terminals are screwed down firmly and no loose strands of wire are present.

IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

GREEN/YELLOW: EARTH

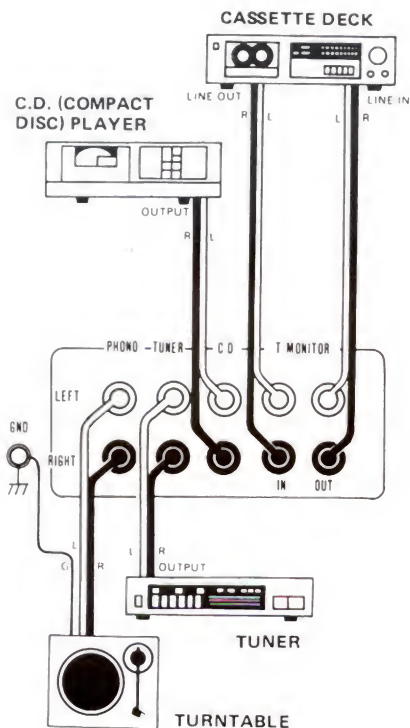
BLUE : NEUTRAL

BROWN : LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows. The wire which is coloured GREEN/YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol \perp , or coloured GREEN or GREEN/YELLOW. The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

CONNECTING COMPONENTS

Connect all necessary audio components to the rear panel of the unit, using RCA pin cords. See the illustration for properly completed connections. When connecting RCA pin cords, be sure that L (left) and R (right) markings on each component are matched correctly. Connect the grounding wire of the turntable to the terminal marked GND on the amplifier.



SWITCHES AND CONTROLS

(1) Power Button

This button turns on the unit. The LED indicator above it will glow when the power is on. Press the button a second time to turn off the power.

Before switching the amplifier on or off, it is advisable to position the volume control at zero.

(2) Headphone Jack

For private listening, plug your headphones into this jack. The volume of the headphone sound can be regulated with the volume control.

To switch off speakers when using headphones, connect your speakers to the switched sockets as described in "hooking up speakers"

(3) Mono button

Pressing this button will cause the unit to reproduce any input signal monaurally. When the button is released, the unit gives stereo reproduction.

(4) Tape Monitor Button

Depress this button when you wish to listen to the signal from tape deck. In the released position, the unit operates in the mode selected by the function selector.

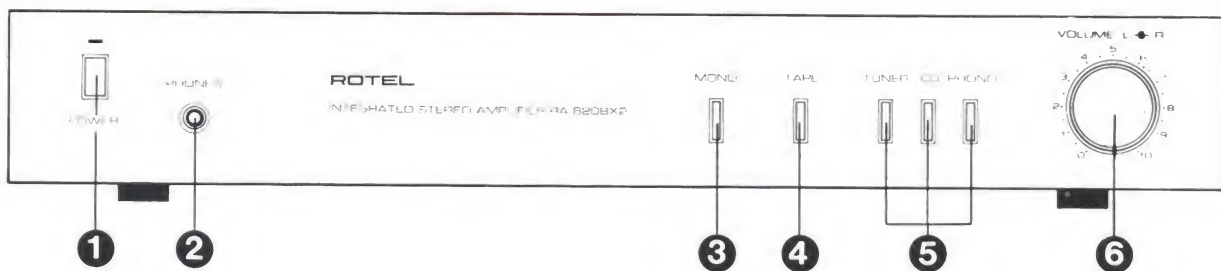
(5) Function Selector

The function selector works only when the Tape Monitor button is released to off. It is used to select program sources: Depress **PHONO** button to reproduce signal from turn-table, **CD** button for signal from compact disc player, and **TUNER** for signal from tuner.

(6) Volume Control

Used to regulate the volume level. Turn clockwise to increase the volume, and counterclockwise to reduce it.

This is a dual concentric knob which permits either separate or combined adjustment of both channels.



OPERATION

- Before commencing operation, check to see if all connections are properly made.
- Always be sure to set the volume control to the minimum position before turning on power.

Listening from turntable

1. Set Tape Monitor button in released (OFF) position.
2. Depress **PHONO** button on the function selector.
3. Start the play, then raise the volume.

Listening from compact disc player or tuner

1. Set Tape Monitor button in released (OFF) position.
2. To listen to a compact disc, depress **CD** button on the function selector; depress **TUNER** button to receive radio broadcast.
3. Play the compact disc or tune in to the desired station, according to instructions given for the equipment.
4. Raise the volume level.

Playing back tape deck

1. Depress Tape Monitor button to ON.
2. Start playback.
3. Raise the volume level.

Recording program source

Play the desired program source according to the procedures mentioned above. The signal from the source will be sent through **TAPE MONITOR OUT** terminals on unit's rear panel. Put the tape deck in the record mode to record the signal. During recording, operation of Volume control, and Mono button will have no effect on the signal being sent through **TAPE MONITOR OUT** terminals.

HUM AND NOISE

In any high fidelity installation, hum may be caused by the interconnection of a turntable, turner and amplifier, and speakers as the result of wiring, different grounding or locations of components.

If hum is experienced with your unit, disconnect everything but the speakers from the unit. Plug in the turntable and if hum or howling appears, move the turntable away from the speakers as much as possible.

Note hum may also be induced by defective cable connections or by running the cables too close to a strong AC field.

When your unit picks up noise during the reception of broadcasts, causes are mostly due to external objects such as fluorescent lamps and house appliances using motor or thermostat, or others that may induce the noise.

Either relocating the unit away from the noise sources or using an improved outdoor antenna may readily solve the problem.

In the event you cannot find the cause, consult your dealer or a qualified electrician.

PROTECTION CIRCUIT

To prevent accidental damage to the unit or speakers, a protection circuit is installed in the unit. If no sound is produced, a blown fuse may be the cause. Turn off the unit, disconnect the plug from the electrical outlet, and consult your dealer or qualified electrician.

VOLTAGE SELECTION

Not available for U.K., Canada and Scandinavia

The unit is a variable voltage equipment that can run on 120V, 220V or 240V power supply. Your unit should already be preset at the proper voltage for use in your area. However, if you move to an area where the power supply voltage is different, consult your dealer.

SPECIFICATIONS

Continuous Power Output . . .	30 watts per channel, min. RMS both channels driven into 8 ohms from 20 to 20,000 Hz with no more than 0.08% total harmonic distortion.
DIN Output	35 watts per channel (1 kHz, 4 ohms, 1% THD)
Music Power	120 watts
Total Harmonic Distortion . . . (20 to 20,000 Hz, from CD)	No more than 0.08% (continuous rated power output) No more than 0.08% (continuous 1/2 rated power output) No more than 0.08% (1 watt per channel power output, 8 ohms)
Intermodulation Distortion . . . (60 Hz : 7 kHz = 4 : 1)	No more than 0.08% (continuous rated power output) No more than 0.08% (continuous 1/2 rated power output) No more than 0.08% (1 watt per channel power output, 8 ohms)
Output: Speaker	4-16 ohms
Headphone	4-16 ohms
Damping Factor	25 (20 to 20,000 Hz, 8 ohms)
Input Sensitivity/Impedance:	
PHONO	3.75 mV/47 kohms
CD	250 mV/24 kohms
TUNER	250 mV/24 kohms
TAPE MONITOR	250 mV/24 kohms
Overload Level (T.H.D. 0.05%, 1 kHz):	
PHONO	140 mV
CD, TUNER, TAPE	3V
Frequency Response:	
PHONO	20 to 20,000 Hz, ± 0.3 dB (RIAA STD)
CD, TUNER, TAPE	10 to 40,000 Hz, +1.0 dB, -3.0 dB
Signal-to-Noise Ratio (IHF, A network):	
PHONO	75 dB
CD, TUNER, TAPE	86 dB

MISCELLANEOUS

Power Requirement	120V/60 Hz, 220V/50 Hz, 240V/50 Hz, or 120, 220, 240V/50-60 Hz (switchable) (depending on destinations)
Power Consumption	200 watts
Dimensions (overall)	430(W) \times 66(H) \times 271(D)mm 16-15/16" \times 2-19/32" \times 10-11/16"
Weight (net)	5.5 kg/12.1 lbs.

- Specifications and design subject to possible modification without notice.
- *Measured pursuant to the Federal Trade Commission's Trade Regulation Rule on Power Claims for Amplifiers (applicable to the U.S.A. only).